

AMENDMENTS TO THE CLAIMS

1-53. (Canceled)

54. (New) A method of controlling power drawn from an energy converter to supply a load, where the energy converter is operable to convert energy from a physical source into electrical energy, the method comprising changing the amount of power drawn from the energy converter when a supply voltage of the energy converter meets a criterion, said criterion and a change in the amount of power drawn from the energy converter being dependent upon a present amount of power supplied to the load.

55. (New) The method of claim 54 further comprising measuring said supply voltage.

56. (New) The method of claim 54 wherein changing said power drawn from the energy converter comprises decreasing said power drawn from the energy converter by an amount corresponding to a change in said power supplied to the load in a time interval.

57. (New) The method of claim 54 wherein changing said power drawn from the energy converter comprises increasing said power drawn from the energy converter by an amount associated with a range of power supplied to the load.

58. (New) The method of claim 54 further comprising deeming said supply voltage satisfies said criterion when said supply voltage is within a first range of voltages relative to a reference voltage.

59. (New) The method of claim 58 wherein said reference voltage corresponds to a maximum power point of the energy conversion device.

60. (New) The method of claim 58 wherein said first range includes voltages greater than said reference voltage.

61. (New) The method of claim 58 wherein said first range includes voltages less than said reference voltage.

62. (New) The method of claim 58 wherein said first range includes voltages less than said reference voltage and voltages greater than said reference voltage.

63. (New) The method of claim 58 wherein said first range excludes a range of voltages within a limit of said reference voltage.

64. (New) The method of claim 58 wherein said first range is dependent upon a trend in measured values of said supply voltage.

65. (New) The method of claim 64 wherein said first range is dependent upon a change in said supply voltage occurring after an increase in said power drawn from the energy converter.

66. (New) The method of claim 65 wherein said first range is bounded between minimum and maximum limits.

67. (New) The method of claim 54 further comprising performing said method periodically.

68. (New) The method of claim 67 further comprising defining a period for performing said method periodically.

69. (New) The method of claim 68 wherein defining said period comprises defining said period as a function of said power supplied to the load.

70. (New) The method of claim 69 further comprising increasing said period when said power supplied to the load is relatively low and decreasing said period when said power supplied to the load is relatively high.

71. (New) The method of claim 58 further comprising adjusting said reference voltage periodically.

72. (New) The method of claim 58 further comprising increasing said reference voltage when the change in the amount of power drawn from the energy converter results in a change in said supply voltage within a second range.

73. (New) The method of claim 72 wherein said second range is dependent upon the present amount of power being supplied to the load.

74. (New) The method of claim 73 wherein said second range is relatively small when the present amount of power supplied to the load is relatively large and wherein said second range is relatively large when the present amount of power supplied to the load is relatively small.

75. (New) The method of claim 72 wherein an amount by which said reference voltage is decreased is dependent upon the present amount of power supplied to the load.

76. (New) The method of claim 75 wherein the amount by which said reference voltage is decreased is relatively large when the present amount of power supplied to the load is relatively low and wherein the amount by which said reference voltage is decreased is relatively low when the present amount of power supplied to the load is relatively high.

77. (New) An apparatus for controlling an energy transfer device operable to draw electrical power from an energy converter operable to convert energy from a physical source into electrical energy, and supply said electrical energy to a load, the apparatus comprising:

a load power sensor operable to measure power supplied to the load by the energy transfer device;

a voltage sensor operable to measure a supply voltage of the energy converter; and

a processor, in communication with said voltage sensor, said load power sensor and the energy transfer device, said processor being configured to cause the energy transfer device to change the amount of power drawn from the energy converter when the supply

voltage of the energy converter meets a criterion, said criterion and the change in the amount of power drawn from the energy converter being dependent upon a present amount of power being supplied to the load.

78. (New) The apparatus of claim 77 wherein said processor is configured to decrease said power drawn from the energy converter by an amount corresponding to a change in said power drawn from the energy converter in a time interval.

79. (New) The apparatus of claim 77 wherein said processor is configured to increase said power drawn from the energy converter by an amount associated with a range of power supplied to the load.

80. (New) The apparatus of claim 77 wherein said processor is configured to deem said supply voltage satisfies said criterion when said supply voltage is within a first range of voltages relative to a reference voltage.

81. (New) The apparatus of claim 80 wherein said reference voltage corresponds to a maximum power point of the energy converter.

82. (New) The apparatus of claim 80 wherein said first range includes voltages greater than said reference voltage.

83. (New) The apparatus of claim 80 wherein said first range includes voltages less than said reference voltage.

84. (New) The apparatus of claim 80 wherein said first range includes voltages less than said reference voltage and voltages greater than said reference voltage.

85. (New) The apparatus of claim 80 wherein said first range excludes a range of voltages within a limit of said reference voltage.

86. (New) The apparatus of claim 80 wherein said first range is dependent upon a trend in measured values of said supply voltage.

87. (New) The apparatus of claim 86 wherein said first range is dependent upon a change in said supply voltage occurring after an increase in said power drawn from the energy converter.

88. (New) The apparatus of claim 87 wherein said first range is bounded between minimum and maximum limits.

89. (New) The apparatus of claim 77 wherein said processor is configured to periodically measure said supply voltage and change said supply power drawn from the energy converter accordingly.

90. (New) The apparatus of claim 89 wherein said processor is configured to define a period for measuring said supply voltage.

91. (New) The apparatus of claim 90 wherein said processor is configured to define said period as a function of said power supplied to the load.

92. (New) The apparatus of claim 91 wherein said processor is configured to increase said period when said power supplied to the load is relatively low and decrease said period when said power supplied to the load is relatively high.

93. (New) The apparatus of claim 80 wherein said processor is configured to adjust said reference voltage periodically.

94. (New) The apparatus of claim 80 wherein said processor is configured to increase said reference voltage when the change in said power drawn from the energy converter results in a change in said supply voltage within a second range.

95. (New) The apparatus of claim 94 wherein said second range is dependent upon the present amount supplied to the load.

96. (New) The apparatus of claim 95 wherein said second range is relatively small when the present amount of power supplied to the load is relatively large and wherein said

second range is relatively large when the present amount of power supplied to the load is relatively small.

97. (New) The apparatus of claim 94 wherein said processor is configured to decrease said reference voltage by an amount dependent upon the amount of power supplied to the load.

98. (New) The apparatus of claim 97 wherein said processor is configured to decrease said reference voltage by a relatively large amount when the present amount of power supplied to the load is relatively low and to decrease said reference voltage by a relatively small amount when the present amount of power supplied to the load is relatively high.

99. (New) The apparatus of claim 77 wherein said processor includes an output operable to provide a power command signal to said energy transfer device, and wherein said processor is configured to produce said power command signal to represent said change in power to be drawn from the energy converter.

100. (New) A system comprising the apparatus of claim 77 and further comprising said energy transfer device.

101. (New) The system of claim 100 wherein said energy transfer device includes a DC to DC converter connected between said energy converter and said load.

102. (New) The system of claim 101 wherein said energy transfer device includes a DC to AC inverter connected between said DC to DC converter and said load.

103. (New) The system of claim 100 further comprising said load.

104. (New) The system of claim 103 wherein said load includes an AC power grid.

105. (New) The system of claim 100 wherein said processor includes an output operable to provide a power command signal to said energy transfer device, and wherein said

processor is configured to produce said power command signal to represent said change in power to be drawn from the energy converter.

106. (New) An apparatus for controlling an energy transfer device operable to draw electrical power from an energy converter operable to convert energy from a physical source into electrical energy, and supply said electrical energy to a load, the apparatus comprising:

means for measuring power supplied to the load by the energy transfer device;

means for measuring a supply voltage of the energy converter; and

means, in communication with said means for measuring power, said means for measuring voltage and the energy transfer device, for changing the amount of power drawn from the energy converter by the energy transfer device when a supply voltage of the energy converter meets a criterion, said criterion and a change in the amount of power drawn from the energy converter being dependent upon a present amount of power being supplied to the load.

107. (New) A computer readable medium encoded with codes for directing a processor to control an energy transfer device operable to draw power from an energy converter operable to convert energy from a physical source into electrical energy, and supply said energy to a load, the codes directing the processor to cause the energy transfer device to change the amount of power drawn from the energy converter when a supply voltage of the energy converter meets a criterion, said criterion and a change in the amount of power drawn from the energy converter being dependent upon a present amount of power supplied to the load.

108. (New) A computer readable signal encoded with codes for directing a processor to control an energy transfer device operable to draw power from an energy converter operable to convert energy from a physical source into electrical energy, and supply said energy to a load, the codes directing the processor to cause the energy transfer device to change the amount of power drawn from the energy converter when a supply voltage of the energy converter meets a

criterion, said criterion and a change in the amount of power drawn from the energy converter being dependent upon a present amount of power supplied to the load.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100